

The Pending Claims

1-9. (cancelled)

10. (previously presented) A method for making a polymer in a biological system comprising

providing one or more substrates selected from the group consisting of 3-hydroxybutyrate, 3-hydroxypropionate, 3-hydroxyvalerate, 4-hydroxybutyrate, 4-hydroxyvalerate, 5-hydroxyvalerate, 3-hydroxyhexanoate, 4-hydroxyhexanoate, and 6-hydroxyhexanoate,

wherein the biological system is selected from the group consisting of bacteria, yeast, fungi, and plants; wherein the biological system expresses enzymes selected from the group consisting of polyhydroxyalkanoate synthase, acyl-CoA transferase, hydroxyacyl CoA transferase, and hydroxyacyl CoA synthetase such that a polymer comprising the one or more substrates accumulates, wherein the polymer is selected from the group consisting of poly (3-hydroxypropionate), poly (3-hydroxypropionate-co-5-hydroxyvalerate), poly (3-hydroxybutyrate-co-4-hydroxyvalerate), poly (4-hydroxyvalerate), and poly (5-hydroxyvalerate).

11. (original) The method of claim 10 wherein the organisms express one or more heterologous genes encoding the enzymes.

12. (cancelled)

13. (previously presented) The method of claim 10, wherein the biological system is a bacterium.

14. (previously presented) The method of claim 10, wherein the biological system is a plant.

AMENDMENT AND RESPONSE TO OFFICE ACTION UNDER 37 C.F.R. § 1.116

15. (previously presented) The method of claim 10, wherein the polymer is poly (3-hydroxypropionate).

16. (previously presented) The method of claim 10, wherein the polymer is poly (3-hydroxypropionate-co-5-hydroxyvalerate).

17. (previously presented) The method of claim 10, wherein the polymer is poly (3-hydroxybutyrate-co-4-hydroxyvalerate).

18. (previously presented) The method of claim 10, wherein the polymer is poly (4-hydroxyvalerate).

19. (previously presented) The method of claim 10, wherein the polymer is poly (5-hydroxyvalerate).